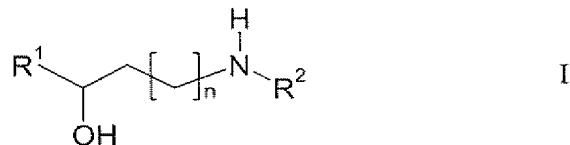


This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A process Process for the enantioselective preparation of amino alcohols of the formula I



in which

R^1 denotes a saturated, unsaturated or aromatic carbocyclic or heterocyclic radical which is unsubstituted or mono- or polysubstituted by R^3 and/or R^4 ,

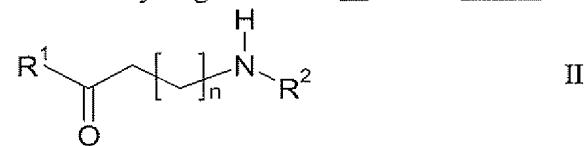
R^2 denotes alkyl having 1-20 C atoms or H,

R^3, R^4 each, independently of one another, denote H, alkyl or alkoxy having 1-20 C atoms, aryl, aryloxy or COOR^2 , F, Cl, Br, OH, CN, NO_2 , $\text{N}(R^2)_2$ or $\text{NHCOR}_2 \text{NHCOR}^2$

and

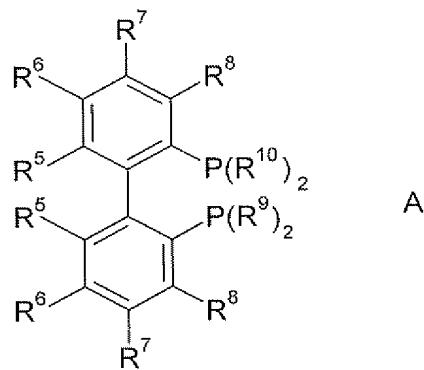
n denotes 0, 1, 2 or 3,

by enantioselective hydrogenation of an amino ketone ketones of the formula II



in which

R^1, R^2 and n have the meaning indicated above, in the presence of a non-racemic catalyst, characterised in that wherein the catalyst is a transition-metal complex in which the transition metal is complexed to a chiral diphosphine ligand A

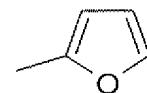
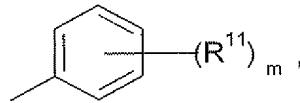


in which

R^5, R^6, R^7 and R^8 each, independently of one another, denote H, alkyl or alkoxy having 1-20 C atoms, aryl, aryloxy or F, Cl, Br, $N(R^2)_2$ or $NHCOR_2$ $NHCOR^2$

each, independently of one another, denote

R^9 and R^{10}



or cyclohexyl

R^{11} denotes H, alkyl or alkoxy having 1-20 C atoms, aryl, aryloxy or SO_3Na , $COOR^{12}$, F, Cl, $N(R^{12})_2$ or $NHCOR^{12}$,

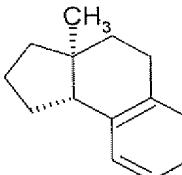
R^{12} denotes alkyl having 1-20 C atoms or H

and

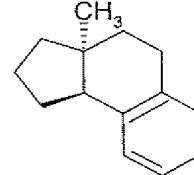
m denotes 0, 1, 2 or 3,

where R^5 and R^6 , R^6 and R^7 and R^7 and R^8 together can also have the meaning

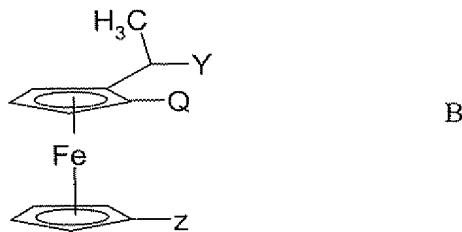
$-(CH_2)_4-$, $-CH=CH-CH=CH-$



or



or B



in which

Y denotes OH, P(cyclohexyl)₂, P(3,5-dimethylphenyl)₂ or P(C(CH₃)₃)₂,

Z denotes H or P(phenyl)₂,

Q denotes PPh₂, P(cyclohexyl)₂, P[3,5-bis(trifluoromethyl)phenyl]₂, P(4-methoxy-3,5-dimethylphenyl)₂ or P(C(CH₃)₃)₂

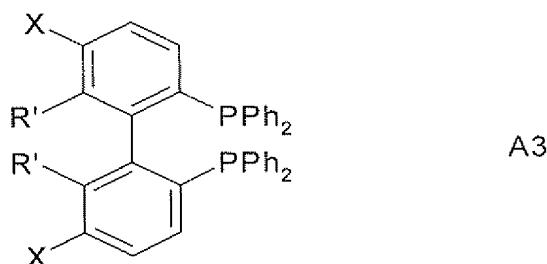
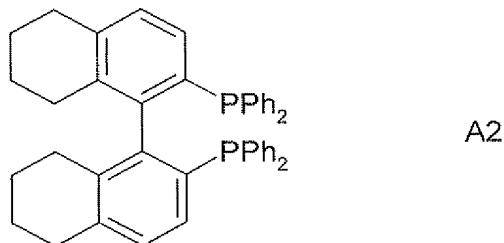
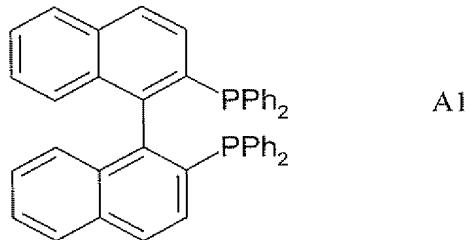
and

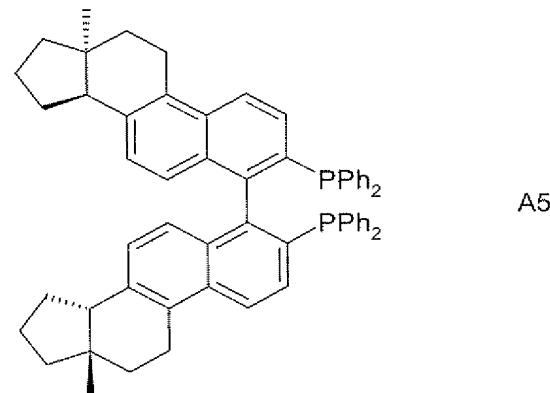
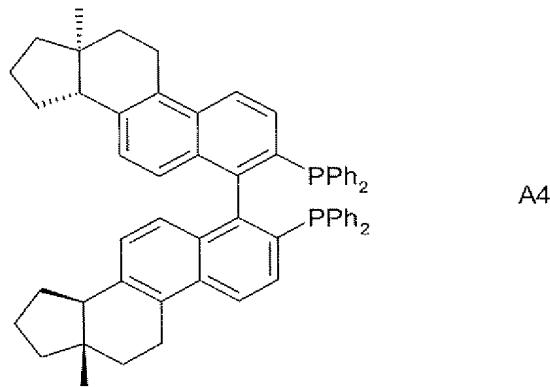
Ph denotes phenyl, o-, m- or p-methylphenyl or dimethylphenyl.

2. (Currently amended) A process Process according to Claim 1, in which R¹ denotes phenyl or 2-thienyl.
3. (Currently amended) A process Process according to Claim 1 or 2, in which R² denotes methyl, ethyl, n-propyl or isopropyl.
4. (Currently amended) A process Process according to Claim 1, in which n denotes 1.
5. (Currently amended) A process Process according to Claim 1 for the preparation of (S)-3-methylamino-1-phenyl-1-propanol or (S)-3-methylamino-1-(2-thienyl)-1-propanol or acid-addition salts thereof.
6. (Currently amended) A process Process for the preparation of a compound compounds of the formula I according to Claim 1, characterised in that wherein the chiral, non-racemic catalyst is a transition-metal complex containing one or more metals or salts thereof selected from the group consisting of rhodium, iridium, ruthenium and palladium.
7. (Currently amended) A process Process for the preparation of a compound

compounds of the formula I according to Claim 1, characterised in that wherein the chiral, non-racemic catalyst is a transition-metal complex containing rhodium or salts thereof.

8. (Currently amended) A process Process according to Claim 1, characterised in that wherein the chiral diphosphine ligand used is a compound of the formula A1 to A5:





in which Ph has the meaning indicated in Claim 1, and X denotes H, alkyl, O(alkyl), Cl, or F, and R' denotes alkyl O(alkyl) or F.

9. (Currently amended) A process Process according to Claim 7, characterised in that wherein the chiral diphosphine ligand used is (S)-(-)-2,2'-bis(di-p-tolylphosphino)-1,1'-binaphthyl or (S)-(-)-2,2'-bis(diphenylphosphino)-1,1'-binaphthyl.
10. (Currently amended) A process Processs for the preparation of a compound compounds of the formula I according to Claim 1, characterised in that wherein the reaction temperature is between 0 and 200°C.
11. (Currently amended) A process Processs for the preparation of a compound compounds of the formula I according to Claim 1, characterised in that wherein the catalyst/ substrate ratio is between 1:5000 and 1:50.

12. (Currently amended) A process ~~Process~~ for the preparation of a compound ~~compounds~~ of the formula I according to Claim 1, ~~characterised in that~~ wherein the hydrogenation is carried out under 1-200 bar of hydrogen.

13. (Currently amended) A process ~~Process~~ for the preparation of a compound ~~compounds~~ of the formula I according to Claim 1, ~~characterised in that~~ wherein the hydrogenation is carried out in the presence of an alcohol.

14. (Currently amended) A process ~~Process~~ for the preparation of a compound ~~compounds~~ of the formula I according to Claim 1, ~~characterised in that~~ wherein the chiral, non-racemic catalyst is a transition-metal complex containing sulfate, chloride, bromide, iodide, PF_6 , BF_4 , methanesulfonate, toluenesulfonate, hexachloroantimonate, hexafluoroantimonate or trifluoromethanesulfonate as anion.

15. (New) A process for the preparation of a compound according to Claim 1, wherein $n=2$.

16. (New) A process according to claim 1, where in $n = 3$.

17. (New) A process for the preparation of a compound according to Claim 1, wherein said compound is obtained in an enantiomeric excess of at least 92.8%.

18. (New) A process for the preparation of a compound according to Claim 1, wherein R^3 and R^4 , independently of one another are H or methyl.

19. (New) A process for the preparation of a compound according to Claim 1, wherein R^5 and R^6 independently of one another are H, alkyl, O-alkyl, Cl, F or in which R^5 and R^6 together form a ring system.

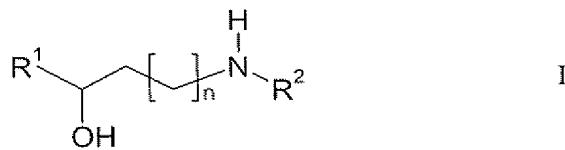
20. (New) A process for the preparation of a compound according to Claim 1, wherein R^7 and R^8 are H.

21.. (New) A process for the preparation of a compound according to Claim 1, wherein R¹¹ is H or methyl.

22. (New) A process for the preparation of a compound according to Claim 1, wherein R¹² is methyl or ethyl.

23. (New) A process for the preparation of a compound according to Claim 1, wherein m is 1.

24. (New) A process for the enantioselective preparation of amino alcohols of formula I



in which

R¹ denotes a heterocyclic radical which is unsubstituted or mono- or polysubstituted by R³ and/or R⁴,

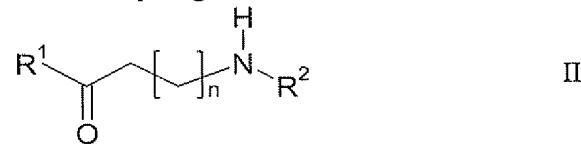
R² denotes methyl

R³, R⁴ each, independently of one another, denote H, alkyl or alkoxy having 1-20 C atoms, aryl, aryloxy or COOR², F, Cl, Br, OH, CN, NO₂, N(R²)₂ or NHCOR₂

and

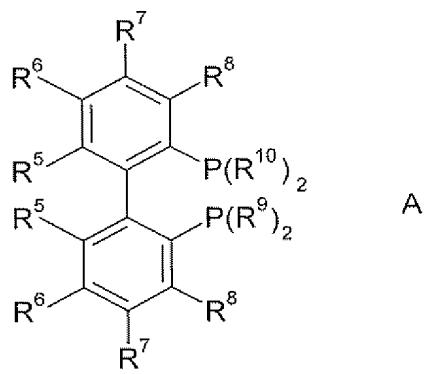
n denotes 1, 2 or 3,

by enantioselective hydrogenation of amino ketones of the formula II



in which

R¹, R² and n have the meaning indicated above, in the presence of a non-racemic catalyst, wherein the catalyst is a transition-metal complex in which the transition metal is complexed to a chiral diphosphine ligand A

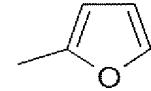
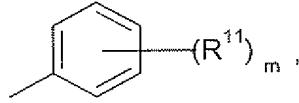


in which

R^5 , R^6 , R^7 and R^8 each, independently of one another, denote H, alkyl or alkoxy having 1-20 C atoms, aryl, aryloxy or F, Cl, Br, $N(R^2)_2$ or $NHCOR^2$

each, independently of one another, denote

R^9 and R^{10}



or cyclohexyl

R^{11} denotes H, alkyl or alkoxy having 1-20 C atoms, aryl, aryloxy or SO_3Na , $COOR^{12}$, F, Cl, $N(R^{12})_2$ or $NHCOR^{12}$,

R^{12} denotes alkyl having 1-20 C atoms or H

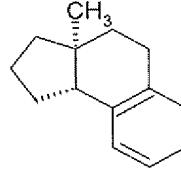
and

m denotes 0, 1, 2 or 3,

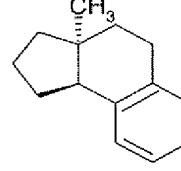
where R^5 and R^6 , R^6 and R^7 and R^7 and R^8 together can also have the meaning

$-(CH_2)_4-$

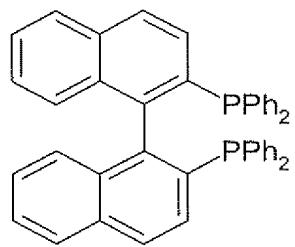
, $-CH=CH-CH=CH-$



or

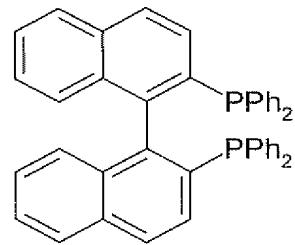


25. (New) A process according to claim 24, wherein said ligand A is



wherein Ph denotes methylphenyl.

26. (New) A process according to claim 4, wherein said ligand A is



wherein Ph denotes methylphenyl.